CELOTEX

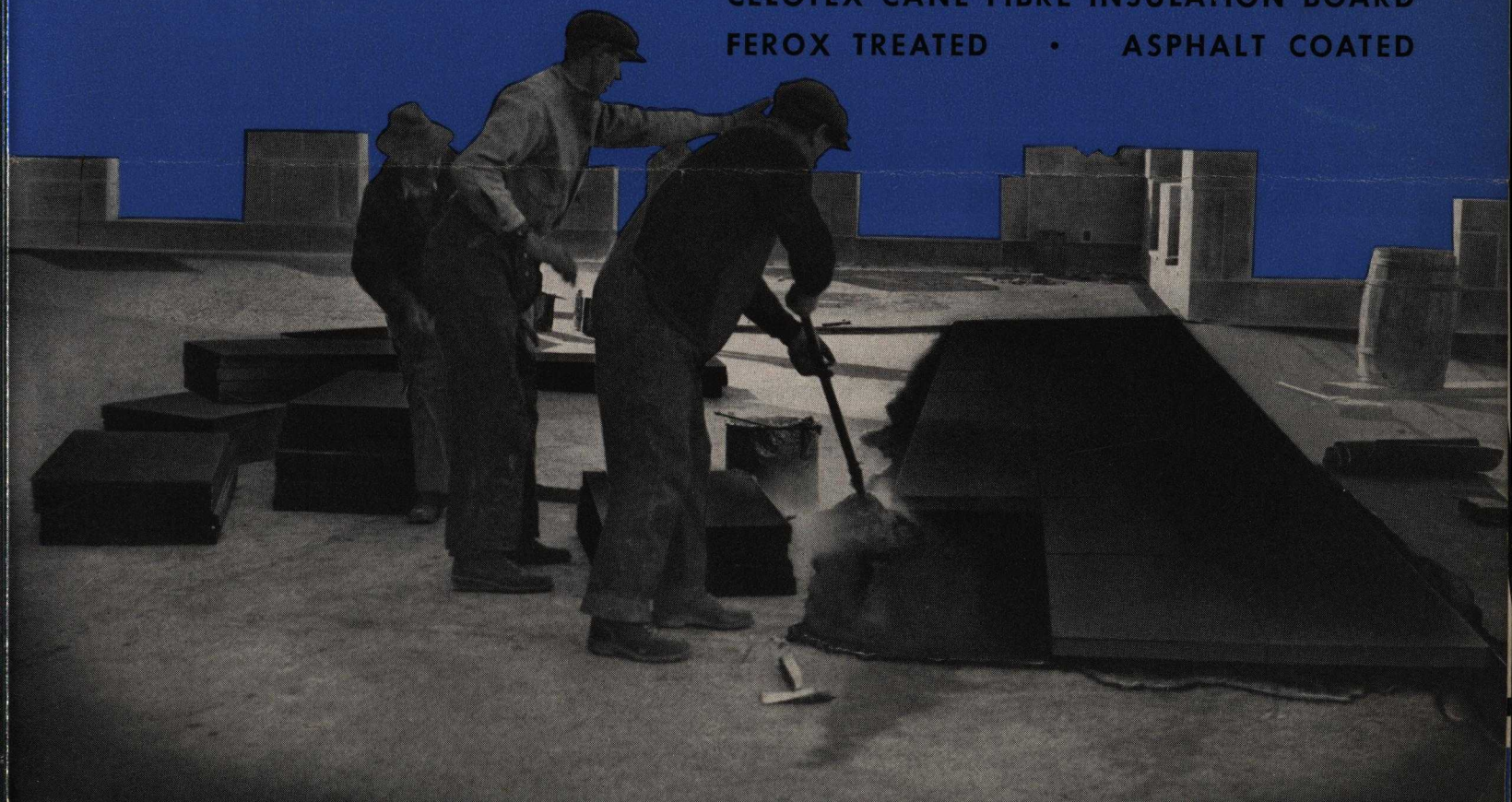
REG. U. S. PAT. OFF.

Preseal

ROOF INSULATION

CELOTEX CANE FIBRE INSULATION BOARD

FEROX TREATED • ASPHALT COATED



CELOTEX Preseal Roof Insulation

REG. U. S. PAT. OFF.

Preferred by those who specify, use and buy quality roof insulation

ARCHITECTS SPECIFY PRESEAL

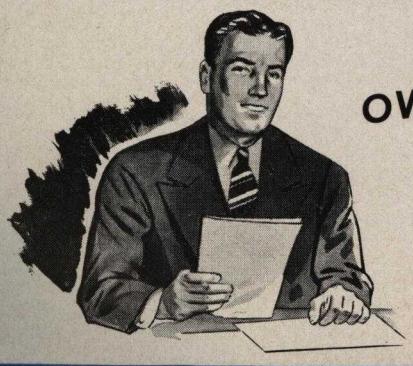
because Preseal is a proved product backed by The Celotex Corporation's quarter century of research and production experience. Preseal's high insulation rating, uniform density, durability and low cost assures complete satisfaction.

CONTRACTORS PREFER PRESEAL

because Preseal is surface impregnated with an asphalt coating on all edges and sides. Moisture pickup during storage is eliminated. Sudden showers during application have no adverse effect on Preseal.

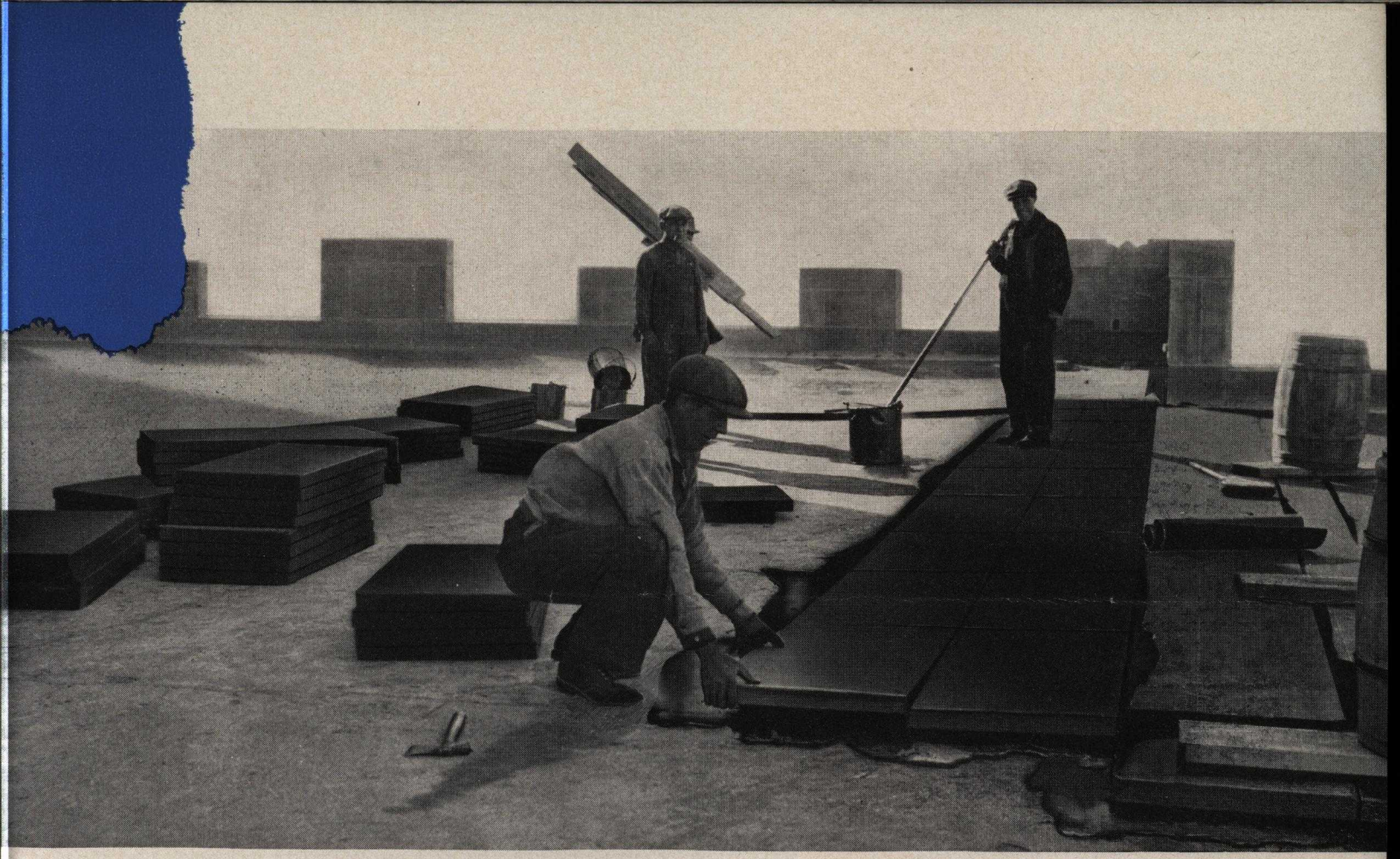
WORKMEN LIKE PRESEAL

because Preseal lies flat and is easy to apply with minimum effort. The asphalt coating insures a thorough bond to roof deck and also forms a positive bond for hot mopped roofing felts of either the asphalt or coal tar pitch type.



OWNERS RECOMMEND PRESEAL

because of the high insulation efficiency and exceptional durability of Preseal. The Ferox (patented) process, exclusive with all Celotex cane fibre insulation board, protects against deterioration from termites, dry rot or fungus growth.



Roof insulation must be dry to be effective. The asphalt coating on all surfaces of Preseal greatly reduces the danger of moisture pickup during storage or if the board is subjected to sudden showers during application. Preseal's coating assures thorough bond between roof deck and insulation—insulation and roofing felt.

Roof Insulation . . . An Established Practice Today

The wisdom of roof insulation is apparent—fuel savings alone more than repay the investment. If the building is air conditioned in summer even greater savings are effected. The following table has been prepared for use by architects, engineers, state and federal agencies who specify or use Celotex Roof Insulation. Specifications are for average conditions. For special conditions we recommend consultation with Celotex engineers.

Type of Building	Temp.	Relative Humidity	Resistance* Required	Thickness of Insulation	
				with ceiling	without ceiling
Dwellings	68-75	35	4.5	½"	1"
Apts., Hotels & Office Bldgs.	68-70	40	6.0	1"	1½"
Industrial Plants with comfortable temperatures	60-70	40-50	7.5	1"	1½"
Industrial Plants with high humidities	70-85	60-80	9.0	••	2"

*Desired over-all resistance of roof structure—the sum of resistances of all component parts. The thermal value ("U" factor) of the roof construction is the numeral one (1) divided by the resistance (1/R).

Comparison Table for Roof Insulation Analysis

The following table shows the relative insulating values of several types of roof decks, uninsulated and insulated with various thicknesses of Celotex Preseal Roof Insulation, and also shows fuel savings under average conditions.

The unit of measure for the insulating value of different constructions is the "Coefficient of Heat Transmission." This coefficient indicates the number of heat units (British Thermal Units) which will pass through a given construction for each square foot of area in one hour for each degree difference in temperature between the air inside and that outside. The lower the coefficient, the greater the insulating value.

The insulating value of any one material is measured by its "conductivity," which expresses the number of heat units (BTU) which will penetrate a one-inch thickness of material per hour, per square foot, per degree difference in temperature between the two surfaces. The average thermal conductivity of Celotex Cane Fibre Products is 0.33 BTU, which is recognized as the standard for this type of insulation, and therefore complies with the Department of Commerce's Commercial Standards and Federal Specifications for roof insulation board.

A good general rule is to include sufficient thickness to provide an overall heat transmission coefficient in the vicinity of .15 BTU for normal conditions. For example, a one-inch wood deck with a lath and plaster ceiling has a coefficient of .31 BTU without insulation. After one inch of Celotex Preseal Roof Insulation is applied, the coefficient is .16 BTU, a reduction of approximately 48% in the heat transmission. Where high humidities exist, or ceiling condensation is prevalent, increase the resistance of the roof construction by specifying a greater thickness of roof insulation, thus raising the temperature of the inside surface above the dew point.

Roof Construction	Thickness of Preseal Roof Insulation	Coefficient of heat Transmission*	Per cent Reduction in heat Transmission	Fuel Saved Each Heating Season per 1,000 Square Feet of Roof Area**		
				Tons of Coal	Gals. of Fuel Oil	Therms of Gas
1″ Wood Deck No Ceiling	None	0.49	..	..	..	..
	1″	0.20	59.2%	3.64	533	720
	1½″	0.15	69.4%	4.27	625	845
	2″	0.12	75.5%	4.65	680	912
1″ Wood Deck, Lath and Plaster Ceiling	None	0.31	..	..	..	..
	1″	0.16	48.4%	1.89	271	372
	1½″	0.13	58.0%	2.26	326	447
	2″	0.11	64.5%	2.51	367	496
4″ Concrete Deck No Ceiling	None	0.72	..	..	..	..
	1″	0.23	68.0%	6.13	899	1217
	1½″	0.17	76.4%	6.91	1011	1365
	2″	0.13	82.0%	7.42	1083	1465
4″ Concrete Deck Lath and Plaster Ceiling	None	0.40	..	..	..	..
	1″	0.18	55.0%	2.76	404	546
	1½″	0.14	65.0%	3.26	478	645
	2″	0.12	70.0%	3.51	514	695
Steel Deck No Ceiling	None	1.06	..	..	..	..
	1″	0.24	77.3%	10.30	1505	2037
	1½″	0.18	83.0%	11.05	1615	2187
	2″	0.14	86.8%	11.56	1690	2277
Steel Deck, Lath and Plaster Ceiling	None	0.46	..	..	..	..
	1″	0.19	58.7%	3.39	496	670
	1½″	0.15	67.4%	3.89	570	769
	2″	0.12	73.9%	4.27	625	844

*Rate of transmission shown in Btu/hr./sq. ft./°F. Coefficients determined according to Guide of the American Society of Heating and Ventilating Engineers.

**Fuel savings calculations based on inside temperature of 70°, outside 35°, making average temperature difference of 35° during heating season of 5,088 hours from October 31 to May 1.

THE CELOTEX CORPORATION

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